//SE 47 (Student Database)

#include <iostream>

using namespace std;

class data

{

private:

string name;

char bg;

string address;

string dob;

string cldiv;

string lic;

static int c;

int roll;

long int phone;

public:

data();

static int getcount();

void getdata();

void show();

data(data \*obj);

data(int roll,long int phone,string name,string address,string dob,string cldiv, string lic);

~data();

};

int data::c=0;

data::data(data \*obj)

{

cout<<"\nCopy constructor implemented"<<endl;

}

data::~data()

{

cout<<"\nDestructor called \n";

}

void data::getdata()

{

cout<<"Enter roll number \n";

cin>>roll;

cout<<"Enter telephone number \n";

cin>>phone;

cout<<"Enter Name \n";

cin>>name;

cout<<"Enter address \n";

cin>>address;

cout<<"Enter D.O.B \n";

cin>>dob;

cout<<"Enter Class and Division\n";

cin>>cldiv;

cout<<"Enter license number \n";

cin>>lic;

}

void data::show()

{

cout<<"Name :"<<name<<endl;

cout<<"Roll Number :"<<roll<<endl;

cout<<"Telephone Number :"<<phone<<endl;

cout<<"Address :"<<address<<endl;

cout<<"Date of birth :"<<dob<<endl;

cout<<"Class and division: "<<cldiv<<endl;

cout<<"License number :"<<lic<<endl;

}

data::data(int roll,long int phone,string name,string address,string dob,string cldiv,string lic)

{

cout<<"\nParameterized Constructor"<<endl;

c++;

this->roll=roll;

this->phone=phone;

this->name=name;

this->address=address;

this->dob=dob;

this->cldiv=cldiv;

this->lic=lic;

}

data::data()

{

roll=0;

phone=0;

name="Name";

address="Address";

dob="DOB";

cldiv="Class and Division";

lic="License no.";

cout<<"\nDefault Constructor"<<endl;

c++;

}

int data::getcount()

{

return c;

}

int main()

{

int num;

data \*d1= new data();

d1->show();

delete d1;

data \*d2=new data(23,9822794182,"Dhruvatara","Kalyani Nagar","22.02.97","SE A","MSIN92U");

d2->show();

data \*d3=new data(d2);

d3->show();

delete d2;

cout<<"Enter size of database";

cin>>num;

data dx[num];

for(int i=0;i<num;i++)

{

dx[i].getdata();

}

for(int i=0;i<num;i++)

{

dx[i].show();

}

cout<<"Number of constructor calls and total number of objects:"<<data::getcount()<<endl;

return 0;

}

Default Constructor

Name :Name

Roll Number :0

Telephone Number :0

Address :Address

Date of birth :DOB

Class and division: Class and Division

License number :License no.

Destructor called

Parameterized Constructor

Name :Dhruvatara

Roll Number :23

Telephone Number :1232859590

Address :Kalyani Nagar

Date of birth :22.02.97

Class and division: SE A

License number :MSIN92U

Copy constructor implemented

Name :

Roll Number :9998

Telephone Number :11629760

Address :

Date of birth :

Class and division:

License number :

Destructor called

Enter size of database1

Default Constructor

Enter roll number

47

Enter telephone number

1234567999

Enter Name

Sushant

Enter address

Akurdi,Pune

Enter D.O.B

15.08.1999

Enter Class and Division

SE,A

Enter license number

MAB189

Name :Sushant

Roll Number :47

Telephone Number :1234567999

Address :Akurdi,Pune

Date of birth :15.08.1999

Class and division: SE,A

License number :MAB189

Number of constructor calls and total number of objects:3

Destructor called